CLAIMS:

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent is:

1. An automatic flowcharting method for diagrammatically representing a multi-nodal process comprising processing operations and decision operations, said method comprising:

(a) converting processing operations and decision operations of said multi-nodal process into a data structure;

(b) analyzing said data structure for identifying a first group of processing operations that appear once in said data structure, and for identifying a second group of processing operations that are associated with two or more decision operations in said data structure;

(c) traversing said data structure to generate an ordered sequence of processing operations for visual representation; and

(d) generating a diagrammatic representation of said ordered sequence including orienting successive processing operations in a vertical dimension and associating attributes to each processing operation of said processing operations according to their identified group while offsetting each successive processing operation in a horizontal dimension, and linking each processing operation of said second group to a further processing step of said processing steps according to a decision operation of said two or more decision operations.

2. The automatic flowcharting method according to Claim 1, said method further comprising the step of:

associating a first visual attribute to said processing operations in said first selected group and a second visual attribute to said processing operations in said second selected group.

3. The automatic flowcharting method according to Claim 2, wherein said first visual attribute is a first color.

4. The automatic flowcharting method according to Claim 2, wherein said second visual attribute s a second color.

5. The automatic flowcharting method according to Claim 1, said analyzing step further comprising:

identifying a third group of processing operations that repeatedly appear in said data structure.

6. The automatic flowcharting method according to Claim 5, said analyzing step further comprising:

associating a third visual attribute to said processing operations in said third group.

7. The automatic flowcharting method according to Claim 6, wherein said third visual attribute is a third color.

8. The automatic flowcharting method according to Claim 1, said method further comprising a step of:

reading an input file containing said processing operations and said decision operations for said multi-nodal process, said processing operations and said decision operations being arranged into a plurality of records each of said plurality of records containing a first processing operation, a second processing operation and a decision operation.

9. The automatic flowcharting method according to Claim 8, said method further comprising a step of:

automatically exporting said processing operations and said decision operations for said multi-nodal process from a database into said input file.

10. The automatic flowcharting method according to Claim 1, said analyzing step further comprising a step of:

detecting deadlock conditions in said sequence.

11. The automatic flowcharting method according to Claim 1, wherein the linking of each processing operation of said second group includes aligning said processing operation to said further processing step in said vertical dimension.

12. The automatic flowcharting method according to Claim 1, wherein said each successive processing operation is offset in said horizontal dimension relative to an immediate prior processing operation.

13. The automatic flowcharting method according to Claim 1, said method further comprising a step of:

writing an output file for said generated diagrammatic representation of said multi-nodal process.

14. The automatic flowcharting method according to Claim 13, wherein said output file is written in a markup language for presentation in a web-enabled browser.

15. The automatic flowcharting method according to Claim 14 wherein said output file is transmitted over a communications network.

16. The automatic flowcharting method according to Claim 15 wherein said communications network is one selected from the group comprising:

an Intranet, and

the Internet.

17. An automatic flowcharting system for diagrammatically representing a multi-nodal process comprising processing operations and decision operations in a client-server environment, said system comprising:

(a) a server interconnected via a communications network to a client, said server including:

(i) a mechanism for converting processing operations and decision operations of said multi-nodal process into a data structure;

(ii) a mechanism for analyzing said data structure for identifying a first group of processing operations that appear once in said data structure, and for identifying a second group of processing operations that are associated with two or more decision operations in said data structure; and

(iii) a mechanism for traversing said data structure to generate and ordered sequence of processing operations for visual representation;

(iv) a mechanism for generating a diagrammatic representation of said ordered sequence including orienting said processing operations in a vertical dimension and associating attributes to each processing operation of said processing operations according to their identified group while offsetting each successive processing operation in a horizontal dimension, and linking each processing operation of said second group to a further processing step of said processing steps according to a decision operation of said two or more decision operations;

(b) said client for receiving said generated diagrammatic representation of said multi-nodal process via said communications network in a form for presentation by said client.

18. The automatic flowcharting system according to Claim17, said server further including:

a mechanism for associating a first visual attribute o said processing operations in said first group and a second visual attribute to said processing operations in said second group.

19. The automatic flowcharting system according to Claim 18, wherein said first visual attribute is a first color.

20. The automatic flowcharting system according to Claim 18, wherein said second visual attribute is a second color.

21. The automatic flowcharting system according to Claim 17, said mechanism for analyzing further comprising:

a mechanism for identifying a third group of processing operations that repeatedly appear in said data structure.

22. The automatic flowcharting system according to Claim 21, said mechanism for analyzing further comprising:

a mechanism for associating a third visual attribute to said third group of processing operations.

23. The automatic flowcharting system according to Claim 22, wherein said third visual attribute is a third color.

24. The automatic flowcharting system according to Claim 17, said server further including:

a mechanism for reading an input file containing said processing operations and said decision operations for said multi-nodal process, said processing operations and said decision operations being arranged into a plurality of records each of

said plurality of records containing a first processing operation, a second processing operation and a decision operation.

25. The automatic flowcharting system according to Claim 24, said server further including:

a mechanism for automatically exporting said processing operations and said decision operations for said multi-nodal process from a database into said input file.

26. The automatic flowcharting system according to Claim 17, said mechanism for analyzing further comprising:

a mechanism for detecting deadlock conditions in said sequence.

27. The automatic flowcharting system according to Claim 17, wherein in the mechanism for generating, each processing operation of said second selected group is vertically linked to said further processing step of said processing steps.

28. The automatic flowcharting system according to Claim 17, said mechanism for generating further comprising:

a mechanism for determining a horizontal indentation for each successive processing operation of said processing operations.

29. The automatic flowcharting system according to Claim 17, said server further including:

a mechanism for writing an output file of said generated diagrammatic representation of said multi-nodal process.

30. The automatic flowcharting system according to Claim 28, wherein said output file is written in a markup language for presentation in a web-enabled browser by said client.

31. The automatic flowcharting system according to Claim 30, wherein said output file is transmitted over said communications network.

32. The automatic flowcharting method according to Claim 31, wherein said communications network is one selected from the group comprising:

an Intranet, and

the Internet.

33. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform an automatic flowcharting method for diagrammatically representing a multi-nodal process comprising processing operations and decision operations, said method comprising:

(a) converting processing operations and decision operations of said multi-modal process into a data structure;

(b) analyzing said data structure for identifying a first group of processing operations that appear once in said data structure, and for identifying a second group of

processing operations that are associated with two or more decision operations in said data structure; and

(c) traversing said data structure to generate an ordered sequence of processing operations for visual representation;

(d) generating a diagrammatic representation of said ordered sequence including orienting said processing operations of in a vertical dimension and associating attributes to each processing operation of said processing operations according to their identified group while offsetting each successive processing operation of said in a horizontal dimension, and linking each processing operation of said second group to a further processing operation of said processing operations according to a decision operation of said two or more decision operations.

34. The program storage device according to Claim 33, said method further comprising the step of:

associating a first visual attribute to said processing operations in said first group and a second visual attribute to said processing operations in said second group.

35. The program storage device according to Claim 34, wherein said first visual attribute is a first color.

36. The program storage device according to Claim 34, wherein said second visual attribute is a second color.

37. The program storage device according to Claim 33, said analyzing step further comprising:

identifying a third group of processing operations that repeatedly appear in said data structure.

38. The program storage device according to Claim 37, said analyzing step further comprising:

associating a third visual attribute to said third group of processing operations

39. The program storage device according to Claim 38, wherein said third visual attribute is a third color

40. The program storage device according to Claim 33, said method further comprising a step of:

reading an input file containing said processing operations and said decision operations for said multi-nodal process, said processing operations and said decision operations being arranged into a plurality of records each of said plurality of records containing a first processing operation, a second processing operation and a decision operation.

41. The program storage device according to Claim 40, said method further comprising a step of:

automatically exporting said processing operations and said decision operations for said multi-nodal process from a database into said input file.

42. The program storage device according to Claim 33, said analyzing step for determining a sequence further comprising a step of:

detecting deadlock conditions in said sequence.

43. The program storage device according to Claim 33, wherein the linking of each processing operation of said second group includes visually aligning said processing operation in said vertical dimension to said further processing step.

44. The program storage device according to Claim 33, wherein said each successive processing operation is offset in said horizontal dimension relative to an immediate prior processing operation.

45. The program storage device according to Claim 33, said method further comprising a step of:

writing an output file of said generated diagrammatic representation of said multi-nodal process.

46. The program storage device according to Claim 45, wherein said output file is written in a markup language for presentation in a web-enabled browser.

47. The program storage device according to Claim 46, wherein said output file is transmitted over a communications network.

48. The program storage device according to Claim 47, wherein said communications network is one selected from the group comprising:

an Intranet, and

the Internet.